

Governor's STEM Academy Brief



Office of Career and Technical Education Services

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The purpose of this monthly brief is to provide information, resources, and a networking vehicle to support the STEM (science, technology, engineering, and mathematics) Academies in Virginia.

GOVERNOR'S STEM ACADEMIES SPOTLIGHT

Virginia Teachers for Tomorrow (VTfT) is a pre-collegiate program designed to encourage academically talented, high-achieving juniors and seniors to consider teaching as a career. Beginning in 2002-2003 with 83 students in 5 school divisions, the VTfT program has grown steadily to serve 2,216 students in the 2012-2013 school year. A Loudoun County Public Schools/Shenandoah University dual-enrollment partnership grants each VTfT student four hours of college credit upon successful completion of the program.

CAREER LINKS—EDUCATION AND TRAINING

- To explore sample workforce development opportunities within the Education and Training Career Cluster, visit sites such as [Advancing Workforce Readiness: Adult Education and Literacy for 21st Century Virginia](#), [Workplace Readiness Skills for the Commonwealth Assessment](#), [College and Career Standards for Adult Education](#) (Susan Pimentel for U.S. Department of Education), [Workforce Development and Training](#) (National Association of Manufacturers), [Partnership for 21st Century Skills](#), [Work Readiness Standards and Benchmarks](#) (ACT), [ETS Workforce Readiness](#), [CareerOneStop](#), [Job Corps](#), [My Next Move for Veterans](#), [Ranked Nonprofits: National Workforce Development 2013](#), and [Skilled for Life? Key Findings from the Survey of Adult Skills](#) (OECD).
- For quick current overviews of training in business and industry, go to [Corporate Training Trends to Watch for in the Coming Decade](#) and [Top 3 Corporate Training Trends & Tips](#). To explore a corporate training career, visit McGraw Hill Education's [College and Career Readiness](#) site.
- See [Teaching in Virginia—Teacher & Administrator Preparation](#), [Educator Preparation—Virginia Teachers for Tomorrow](#), for preparation and training required to teach in Virginia public schools.
- To explore issues and careers in distance learning education, visit sites such as [Considerations Regarding Synchronous versus Asynchronous Delivery \(or Both\)](#) (VCU Center for Teaching Excellence), [Online Learning: Does It Help Low-Income and Underprepared Students?](#) (Shanna Smith Jaggars), [Digital Natives, Digital Immigrants, and the Analog Campus](#) (Diane Dean and Arthur Levine), USDLA's links for "Learning" and "Research Center" ([United States Distance Learning Association](#)), and [Is Distance Education for You?](#) ([Distance Education and Training Council](#)).
- Many educators choose paths outside the traditional classroom, such as those involved in [alternative education](#), [homebound services](#), [adult education](#), or [educational assessment](#).
- To investigate a variety of careers in the Education and Training Career Cluster, go to [LibraryCareers.org](#), [InsideCareerInfo](#), McGraw Hill Education's [College and Career Readiness](#), [Glencoe Online Career Clusters Series](#), and [Virginia Career VIEW](#) (search by cluster).
- Offender education offers many teaching/training opportunities and demands a special type of commitment, as evident in resources such as the following: [Greater Richmond Workforce](#), [Correctional Education: General Resources](#) (U.S. Department of Education), [Correctional Education Association](#), [Take](#)

[Charge of Your Future: Get the Education and Training You Need](#), and [Virginia Department of Corrections](#) (see links under Educational Programs).

GRANTS AND OPPORTUNITIES

- The White House recently announced Youth CareerConnect, a \$100 million competitive grant program for high schools to improve efforts to prepare students for college and high-demand careers. High schools that partner with colleges and employers will compete for 25-40 grants that range in amounts from \$2 to \$7 million. Awards are anticipated to be made in early 2014 for program implementation to align with the 2014-15 school year. The application deadline is January 27, 2014. For program and application information, please visit the United States Department of Labor Web site at <http://www.doleta.gov/ycc/>.
- In partnership with the Collision Repair Education Foundation, GEICO has awarded the Chantilly Academy Auto Collision program a \$5,000 grant to use toward the purchase of items on their "Makeover Wish List."
- A Governor's STEM Academy at George C. Marshall High School participated in Virginia FIRST Academia Day Robotics Competition hosted by the International Test and Evaluation Association (ITEA) at the Hyatt Regency in Crystal City, Virginia. A five-member team competed against eight other teams from Virginia and Maryland. The objective of the competition was to build a robot to meet government requirements, perform necessary tests and evaluations, devise a marketing strategy, and then persuade the government to invest in the product. The mission was to mine valuable minerals from a simulated planet surface, attempting to get as many objects as possible, and return them and the robot safely to Earth. The team earned the Entrepreneurs Award.
- The [NEA Foundation](#) provides grants to improve the academic achievement of students in U.S. public schools and higher education institutions in any subject area. The proposed work should engage students in critical thinking and problem solving that deepen their knowledge of standards-based subject matter. The work should also improve students' habits of inquiry, self-directed learning, and critical reflection.

INSTRUCTIONAL STRATEGIES

- The National Center for Education Statistics offers [Fast Facts](#) about educational topics, ranging from early childhood to lifelong learning.
- For research concerning the effect of teachers on their students' future income, see [Knowledge for Earnings' Sake](#) (*The Economist*, October 12, 2013).
- Investigate the world of teaching students from many cultures at [ESL Café](#), [Conversation Questions for the ESL/EFL Classroom](#), [ESL Teachers Board](#), [ESL-Kids.com](#), [ETS TOEFL](#), [American English](#), [Cultures in the Classroom](#), and other similar resources.
- Gain an overview of special needs education through sites including the following: [Virginia Department of Education Special Education](#), [Building the Legacy: IDEA 2004](#) (U.S. Department of Education), [National Center for Learning Disabilities](#), [National Dissemination Center for Children with Disabilities](#), [VCU Autism Center for Excellence](#), [Autism Spectrum Disorders](#), [Attention-Deficit/Hyperactivity Disorder](#), [Down Syndrome](#), and [Special Education News](#).
- Lesson ideas and plans for the Education and Training Career Cluster are available at Texas's [Statewide Instructional Resources Development Center](#), [Nebraska Curriculum for Careers](#), and [South Dakota Career Cluster Posters](#).

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